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Electrical and Electronics 10, 20, A30, B30 An Initial List of Implementation Materials

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Electrical and Electronics 10, 20, A30, B30 An Initial List of Implementation Materials

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Instructional Resources Unit
Curriculum and Instruction Branch
Saskatchewan Education
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Electrical and electronics 10, 20, A30, B30: An initial list of implementation materials

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Foreword

This publication lists learning resource materials that have been evaluated by Saskatchewan educators and are considered appropriate for support of the *Electrical and Electronics 10, 20, A30, B30 Curriculum Guide*. The purpose of this list is to provide teachers with suggested starting points for building a wide range of suitable instructional materials.

These titles are offered only as suggestions; teachers are encouraged to investigate other applicable resources and to select additional suitable materials.

This document is also available on the Saskatchewan Education website at:

http://www.sasked.gov.sk.ca/curr_inst/iru/index.html

Resource-based Learning

The items listed are intended to promote the philosophy of resource-based learning, in which the students gain knowledge and understandings through a variety of resources and instructional approaches. This multi-resource approach provides students with opportunities to interact with a wide range of current materials to suit varied learning styles.

Teachers are reminded that resource-based courses of study can be enhanced through the use of additional materials such as the following:

- newspapers and magazines
- pamphlets, brochures, television and radio programming
- environmental print, such as posters
- Internet sites
- public library collections.

It is important that human resources be accessed as well. Every community has capable people who can enrich educational experiences.

Background Review: Selection Policy and Criteria for Selection

This list provides suggestions for resources; however, it remains the responsibility of classroom teachers, in consultation with teacher-librarians, to preview and select materials. Selection should be based on the objectives and philosophy of the curriculum, students' interests and abilities, students' prior knowledge and experience and the interests or needs of the community.

As well, material should be considered in terms of the following characteristics:

- literary quality
- cultural relevance and accuracy
- country of origin
- equity regarding gender, abilities, age and race
- accuracy
- ease of reading
- relevance to current issues
- adaptability.

Each school division is responsible for developing its own materials selection policy in order to address the particular needs of students and teachers in that division. Materials should be chosen in accordance with the school division's materials selection policy. Several publications available from Saskatchewan Learning Resources Distribution Centre (LRDC) provide further assistance in the selection process. These include:

Diverse Voices: Selecting Equitable Resources for Indian and Métis Education, 1992 - suggests strategies for recognizing and dealing with bias in resources.

Indian and Métis Education Policy From Kindergarten to Grade XII, 1995 - provides rationale and guidelines for integrating Indian and Métis materials into curricula.

Learning Resource Centres in Saskatchewan: A Guide for Development, 1988 - provides guidance for developing a selection policy and suggests criteria for selection.

Multicultural Education and Heritage Language Education Policies, 1994 - provides rationale for integrating multicultural materials into curricula.

Selecting Fair and Equitable Materials, 1991 - suggests strategies useful for recognition of bias and stereotypes.

Analyzing Present Resources

This list should be cross-referenced with the school resource centre catalogue in order to identify suitable resources already present in the school library collection.

The Media Index and the Index of Suggested Uses are useful checklists for identifying resources already present in the school library collection. Teachers may use these indexes to ensure a balance of print and non-print resources within each module.

Materials in the present collection should be assessed based on the needs of the course, the community, the students and teachers.

Resource needs not met by the present collection could be identified by the teachers and teacher-librarian working together. Some materials may be useful for several grade levels and subject areas. Teachers are encouraged to coordinate materials selection at the school or school division level.

Previewing Resources

Teachers and teacher-librarians are urged to preview materials carefully before suggesting them for classroom use, and are advised to refer to their school division's selection policy for guidance in making choices about materials.

If schools have not been able to preview the materials prior to purchase, it is advisable to order only one copy to review before placing orders for multiple copies. Return policies vary from company to company, but if inappropriate materials have to be returned, they must be in saleable condition. Learning Resources Distribution Centre will allow most materials to be returned.

Purchasing Resources

Schools interested in purchasing resources (except videos) from this list, should contact **Learning Resources Distribution Centre (LRDC)** or order them from the distributors cited in the distributor directory.

Resources that LRDC has in stock have been given an order number **(Order no.)** rather than an ISBN. Other items can be special ordered through LRDC. Orders to LRDC can be placed by phone (306) 787-5987, fax 1-800-668-9747 or on-line at:

http://lrdc.sasked.gov.sk.ca

Prices quoted are subject to change and do not include taxes, but will serve as a guide to approximate costs. LRDC prices include shipping and handling fees.

Videos

Videos listed are often available from **Media Group (MGR)**. These videos are high quality programs that can be acquired at a nominal cost. For further information please consult the Educational Video Duplication Service catalogue available from Media Group. Schools are responsible for postage, a duplication charge of $1.00 per title, blank tapes and applicable taxes. Blank tapes may be supplied by the school or purchased from Media Group. Please refer to the distributor directory for the addresses, fax and telephone numbers. Media Group provides on-line services at:

http://videodb.mg.sk.ca/index.html

On-line Databases: Infotrac, Ebscohost, CBCA/Repère

Saskatchewan Education offers a number of on-line databases for periodicals and newspapers. On-line databases are a powerful tool to assist teachers with the integration of technology into teaching and learning. The databases provide teachers and students with access to the **most current**

of information on any given topic/subject area.

Canadian content is featured in ***Canadian Business and Current Affairs (CBCA/ Repère-French)***, Infotrac's ***Canadian Periodical Index Quarterly (CPIQ)*** and Ebscohost's ***Canadian Newspaper Source.***

The databases are located at:

http://www.sasked.gov.sk.ca/docs/infotrac.html

To access, please click on your region and enter the appropriate password. If you need the password, contact your teacher-librarian, local Resource-based Learning Consultant or Saskatchewan Education at (306) 787-4431.

Internet Sites

Saskatchewan Education is providing a forum through its homepage on the World Wide Web for teachers to share educationally appropriate Internet sites. If teachers wish to suggest new Internet sites or evaluate websites that have been suggested by other teachers, they may do so at:

http://www.sasked.gov.sk.ca/cgi-bin/urldb/urlreview

Information on sites that are highly recommended will be shared with teachers. Saskatchewan Education will list the sites recommended for curriculum support at:

http://www.sasked.gov.sk.ca/cgi-bin/urldb/urlsearch

Saskatchewan Education also provides links to other provincial and territorial education websites at:

http://www.sasked.gov.sk.ca/curr_inst/ltech/links.html

The discussion area for Practical and Applied Arts can be found at:

http://www.sasked.gov.sk.ca/docs/discussion.html

Examples of Appropriate Internet Sites

The following Internet sites provide a very brief overview of what is available. These sites have been evaluated and are recommended for use in schools. It is recommended that a careful screening and evaluation of each site be undertaken prior to using it.

If you are unsure about the reliability of the information found at a website, compare the author's claims and evidence with other sources with which you are familiar. When in doubt, choose only the sites that list the authors' and/or contributors' names along with the title. If the site does not identify contributors and authors, the information found at the site might not be reliable.

Alex's Electronic Resource Library
http://www.iserv.net/~alexx/lib/tutorial.htm

Authentic Workplace Materials
http://www15.hrdc-ddrhc.gc.ca/awm/default.asp

Canadian Electricity Association
http://www.canelect.ca/

Canadian Standards Association
http://www.csa-international.org/english/home/index.htm

Circuit Cellar
http://www.circuitcellar.com/

Essential Skills: Skills for Life Learning and Work
http://www15.hrdc-drhc.gc.ca/english/es.asp

Nuts & Volts
http://www.nutsvolts.com/

Popular Electronics
http://www.gernsback.com/noframe/pe/PEindex.html

Printed Circuit Design
http://www.pcdmag.com/

Robot Information Central
http://www.robotics.com/robots.html

Robot Science & Technology
http://www.robotmag.com/

Robotics
http://www.nosc.mil/robots/index.html

Saskatchewan Labour
http://www.labour.gov.sk.ca/

Saskatchewan Labour - Health and Safety Video Catalogue
http://www.labour.gov.sk.ca/safety/video/

Virus Alert

When downloading files and applications, Internet users should be aware of the danger of viruses. Downloaded files and applications should always be scanned using an anti-virus utility. It is also advisable to purchase updates to the anti-virus utility regularly. These updates identify the new viruses as well as the old.

How to Use the Initial List

Titles and Descriptions

An example of a print citation is:

Title ↓ — Media Designation ↓ — Author ↓ — Publisher ↓

Electrical Wiring: Residential. 2nd Can. ed. (Print-Non-Fiction). Mullin, Ray C., et al. Nelson Thomson Learning **(LRDC)**, 1999. 491 p. Order no. 9487 ($76.40 hdc.).

↑ Distributor ↑ Date ↑ Collation ↑ Order Number — Annotation ↓

(CAN) This edition is based on the *Canadian Electrical Code, Part I: The Safety Standard for Electrical Installation.* It includes all aspects of residential wiring from the design of wiring of a residence to actual installation. A few of the areas covered are: calculating conductor sizes and voltage drop, sizing service, connecting electrical appliances and installing recessed fixtures. Each unit offers clearly defined objectives and questions as well as problems that deal with chapter objectives. Many diagrams and illustrations further emphasize unit material. This resource includes a table of contents, an index and 10 poster-size plans for single family dwellings.
Suggested Use: Residential Wiring; Survey Course - Secondary Level

The abbreviation **hdc.** denotes hardcover edition; **pbk.** denotes paperback edition.

ISBN denotes the International Standard Book Number, usually the order number.

Dup. is an abbreviation indicating that a video is available for duplication from Media Group.

(CAN) indicates that the resource includes Canadian content.

(SK) denotes that the resource includes Saskatchewan content.

Suggested Use provides suggestions for the module(s) that the resource best supports.

Other Use indicates the other subject area(s) and level(s) that the resource has previously been recommended for in Saskatchewan Education bibliographies.

(LRDC) indicates that the resource is stocked by LRDC and can be ordered directly, using the order number given. Please note that LRDC will special order all other materials listed in the bibliography, except videos.

Distributor Directory

The abbreviations enclosed in parentheses following the publisher or producer represent the distributor. The full names, addresses (including e-mail and websites where available), fax and phone numbers of these companies are given in this section. Please note that some distributors provide a toll free phone number.

Index of Suggested Uses

Titles are listed alphabetically according to the modules that they best support.

Media Index

Titles are listed alphabetically under each media designation.

Titles and Descriptions

Basic Electronics. 8th ed. (Print-Non-Fiction). Grob, Bernard. Glencoe/McGraw Hill (MHR), 1997. 1010 p. ISBN 0-02-802253-X ($129.95 hdc.).

This book is intended for beginning students who are taking their first course in the fundamentals of electricity and electronics. Following a survey chapter on electronics, the book provides complete and comprehensive coverage of the subjects related to the field. A sampling of the topics covered includes Ohm's law, series circuits, voltage dividers, conductors and insulators, batteries, alternating current, inductance and electronic circuits. Colour photographs, line drawings, self-tests, objectives and reviews all help to make the text more accessible. An index and a glossary are included.
Suggested Use: General; Teacher Reference

Basic Mathematics for Electricity and Electronics. 8th ed. (Print-Non-Fiction). Singer, Bertrand B., Forster, Harry and Schultz, Michel E. Glencoe/McGraw Hill (MHR), 2000. 897 p. ISBN 0-02-805022-3 ($119.95 hdc.).

Although this is a fairly technical resource, teachers will be able to use this book to obtain suggestions on how best to approach the math that is associated with electricity and electronics. Some of the areas covered include simple electric circuits, formulas, Kirchhoff's Laws, Algebra of complex electric circuits, capacitance and three-phase systems. Each chapter includes self-tests, reviews and Internet activities. An index is included.
Suggested Use: Teacher Reference

Basic Skills in Electricity and Electronics Series (Print-Non-Fiction). Please refer to the titles: *Electricity: Principles and Applications, Electronics: Principles and Applications* and *Industrial Electronics*.

Blueprint for Life/Work Designs. Rev. ed. (Print-Non-Fiction). Redekopp, Dave. The National Life/Work Centre (NLW), 2000. unp. No order number is required. ($25.00 binder).

(CAN) This resource addresses the need for high quality career development programs for youth by providing specific guidelines that list competencies considered important to develop throughout one's life/work building process. The competencies cover the areas of personal management, learning and work exploration, and life/work building. Indicators, that describe more specific outcomes in terms of knowledge, skills and attitudes, are also provided. *Blueprint* provides a theoretical framework for the work study and career modules in all Practical and Applied Arts courses. In addition to this package, there is *Blueprint for Life/Work Designs: The Quick Reference Guide*. This information is also accessible through a website at: *http://www.lifework.ca/blue_2000/pr_blue_draft.htm*.
Suggested Use: Career Opportunities; Work Study; Teacher Reference
Other Use: Mechanical/Automotive

Career Options for Women Series (Video). Please refer to the title: *Construction*.

Construction (Video). (Career Options for Women Series). Third Wave Communications Inc. **(MGR)**, 1999. 24 min. Dup. order no. V6845. Teacher's Guide for series - Order no. G6843 ($8.25 loose-leaf).

(CAN) This video from the *Career Options for Women Series* focuses on opportunities that are available for women in the construction industry. Viewers are informed that while construction in Canada accounts for 12% of the national economy, only 11% of construction employees are women. They are also introduced to three successful women who have chosen non-traditional careers in the construction industry–a welder, a carpenter and an electrician.

Supporting print is available from Media Group.
Suggested Use: Career Opportunities

Other Use: Construction; Welding

Delmar's Standard Textbook of Electricity. 2nd ed. (Print-Non-Fiction). Herman, Stephen L. Delmar Publications **(LRDC)**, 1999. 1040 p. Order no. 1694 ($94.70 hdc.). Instructor's Guide - Order no. 1702 ($24.65 pbk.):

This text offers theoretical and practical information about DC/AC circuits and machines. Herman's new edition includes increased coverage of transformers and electrical filters, as well as additional formulas and examples for determining impedance in resistive, inductive and capacitive series and parallel circuits. The extensive use of coloured illustrations and the easy-to-follow format make this a valuable resource for teachers and students. This book includes a table of contents, a glossary and an index.
Suggested Use: Batteries; Electric Motors; Electrical Motor Controls; Integrated Circuits; Survey Course - Secondary Level

Digital Electronics: Principles and Applications. 5th ed. (Print-Non-Fiction). Tokheim, Roger L. Glencoe/McGraw Hill (MHR), 1999. 406 p. ISBN 0-02-804161-5 ($114.95 hdc.).

This resource is an excellent choice for the student who is career-orientated in the area of digital electronics. Using an accessible format, the author has presented a very complete discussion of the details associated with the field. Following a general introduction to digital electronics, topics such as logic gates, IC specifications, shift registers and memories are covered. The usefulness of the book has been enhanced by the inclusion of objectives, self-tests, colour photographs, line drawings, summaries, review questions and critical thinking questions. An index and a glossary are included.
Suggested Use: Digital Concepts; Teacher Reference

Dying to Work (Video). (W5 Series). CTV Television Network Ltd. **(MGR)**, 2000. 19 min. Dup order no. V638.

(CAN) As more and more young people start their first jobs, the rate of accidents and deaths is rapidly rising. This program features interviews with the parents of several teens who were killed or seriously injured shortly after starting their jobs. The need to ask questions related to safety before starting a job is stressed as are the rights and responsibilities of the employer and the employee. This is an effective video that reinforces a strong safety message.
Suggested Use: Safety

Electric Circuits and Machines. 2nd Canadian ed. (Print-Non-Fiction). Lister, Eugene C. and Golding, Michael R. McGraw-Hill Ryerson Limited (MHR), 1996. 570 p. ISBN 0-07-552603-4 ($71.95 hdc.).

(CAN) This text supports the electrical portion of the *Electrical and Electronics 10, 20, A30, B30 Curriculum*. Some of the topics covered include: motors, generators, single and three-phase circuits, transformers and electrical instruments. Each chapter concludes with review questions and problems. Black-and-white photographs and numerous diagrams are used throughout this resource. A table of contents and an index are included.
Suggested Use: Batteries; Electric Motors; Electrical Motor Controls; Power Supplies

Electrical Code Simplified: Residential Wiring: Saskatchewan Book 1. 5th ed. (Print-Non-Fiction). Knight, P. S. Knight, P. S. **(LRDC)**, 1999. 141 p. Order no. 2013 ($8.00 pbk.).

(SK) This valuable manual is a simplified version of the Canadian Electrical Code. Many references from the *Saskatchewan Provincial Electrical Code Rules* are presented. Each of the 33 sections deals with a specific phase of the installation. The well-labelled diagrams, charts and photographs clarify the text. This is a necessary resource for electrical construction. It includes a table of contents and an index.

Suggested Use: Residential Wiring; Safety; Survey Course - Middle Level; Survey Course - Secondary Level

Electrical/Electronic Systems (Print-Non-Fiction). Mazur, Glen A. and Proctor, Thomas E. American Technical Pubs., Inc. (GAG), 1995. 490 p. ISBN 0-8269-1772-0 ($79.95 hdc.).

Using colourful drawings, charts and photographs, this resource presents a good general overview to the field of industrial electrical systems. Some of the areas covered include symbols and drawings, rotating outputs, motors, non-rotating outputs and interfaces. An index and a glossary are included.
Suggested Use: General; Survey Course - Secondary Level

Electrical Motor Controls. 2nd ed. (Print-Non-Fiction). Mazur, Glen A and Rockis, Gary. American Technical Pubs., Inc. **(LRDC)**, 2001. 544 p. Order no. 3316 ($94.70 hdc.)

This American text provides comprehensive coverage of the control devices used in contemporary industrial electrical systems. A few of the topics covered include: motor starters, solenoids, control devices, motor circuits, power distribution systems and accelerating and decelerating methods. Coloured photographs, charts and diagrams are interspersed throughout the text. Support material includes a CD-ROM containing quizzes, a glossary and other related material. The text offers a table of contents, a glossary and an index.
Suggested Use: Electric Motors; Electrical Motor Controls; Safety

Electrical Power: Motors, Controls, Generators, Transformers (Print-Non-Fiction). Kaiser, Joe. Goodheart-Willcox Publisher (GDS), 1998. 331 p. ISBN 1-56637-366-2 ($69.00 hdc.). Laboratory Manual - ISBN 1-56637-367-0 ($18.95 pbk.).

The emphasis of this resource is placed on the practical rather than the theoretical aspects of electrical power. Chapters cover the rules governing the behaviour of electricity and magnetism, the machines and devices that generate, transform, and use electrical power, and the control of motors. They include objectives, a summary, review questions and problems, and numerous diagrams. Included are a table of contents, a glossary and an index.

The laboratory manual consists of experiments and problems.
Suggested Use: Electric Motors; Electrical Motor Controls; Power Supplies

Electrical Principles and Practices (Print-Non-Fiction). Mazur, Glen A. and Zurlis, Peter A. American Technical Pubs., Inc. **(LRDC)**, 1997. 460 p. Order no. 1692 ($57.75 hdc.). Instructor's Guide - Order no. 1693 ($17.65 pbk.).

This American text provides a comprehensive introduction to basic electrical theory, circuit fundamentals and practical wiring techniques. A chapter covering basic mathematical principles such as decimals, ratios, fractions and conversions is included to help students understand fundamental electrical and electronic calculations and problem solving. Black-and-white diagrams, charts and graphs help to clarify the print. This book offers a table of contents, a glossary and an index.
Suggested Use: Digital Concepts; Electric Motors; Power Supplies; Safety; Survey Course - Middle Level; Survey Course - Secondary Level

Electrical Safety in the Workplace (Video). (Safety Care Series). Safetycare Inc. (SCI), 1996. 23 min. No order number is required. ($180.00).

The basics about how electricity behaves are covered in this video. It also examines the type of accidents that could happen if students do not have a proper understanding of how electricity works. The emphasis of the video is on how to prevent the accidents from occurring. Using the proper safety equipment is also demonstrated.
Suggested Use: Safety

Electrical Wiring: Residential. 2nd Canadian ed. (Print-Non-Fiction). Mullin, Ray C., et al. Nelson Thomson Learning **(LRDC)**, 1999. 491 p. Order no. 9487 ($76.40 hdc.).

(CAN) This edition is based on the *Canadian Electrical Code, Part I: The Safety Standard for Electrical Installation.* It includes all aspects of residential wiring from the design of wiring of a residence to actual installation. A few of the areas covered are: calculating conductor sizes and voltage drop, sizing service, connecting electrical appliances and installing recessed fixtures. Each unit offers clearly defined objectives and questions as well as problems that deal with chapter objectives. Many diagrams and illustrations further emphasize unit material. This resource includes a table of contents, an index and 10 poster-size plans for single family dwellings.
Suggested Use: Residential Wiring; Survey Course - Secondary Level

Electricity and Basic Electronics (Print-Non-Fiction). Matt, Stephen R. Goodheart-Willcox Publisher (GDS), 1998. 368 p. ISBN 1-56637-406-5 ($74.00 hdc.). Instructor's Guide - ISBN 1-56637-408-1 ($6.90 pbk.). Workbook - ISBN 1-56637-407-3 ($19.85 pbk.).

This resource provides a basic introduction to electrical fundamentals, electronic principles and circuit design. Each new concept builds on the information presented in the previous chapters. In addition to the numerous black-and-white photographs and diagrams, each chapter includes learning objectives, a summary, a list of key words and terms, review questions and activities. Safe work habits are reinforced throughout the book. This resource offers a table of contents, a glossary and an index.

The workbook contains questions and activities that correspond with each chapter in the text.

The instructor's guide provides answers to the workbook questions.
Suggested Use: Career Opportunities; Cells and Small Voltage Sources; Digital Concepts; Integrated Circuits; Electric Motors; Power Supplies

Electricity and Electronics (Print-Non-Fiction). Gerrish, Howard H., Dugger, William E. and Roberts, Richard M. Goodheart-Willcox Publisher **(LRDC)**, 1999. 479 p. Order no. 9388 ($68.20 hdc.).

This resource offers practical information about the fundamentals of electricity and electronics. The six main topics covered are: fundamentals of electricity and electronics, applied electricity, alternating current circuits, electronic devices and applications, basic electronic circuits and electronic communication and data systems. Each chapter contains an overview, a summary, review questions and many appealing project ideas. Gender equitable coloured photographs, diagrams and charts are interspersed throughout the text. This book includes a table of contents, a glossary and an index.
Suggested Use: Amplifiers; Career Opportunities; Cells and Small Voltage Sources; Digital Concepts; Electric Motors; Integrated Circuits; Power Supplies

Electricity and Electronics Technology. 7th ed. (Print-Non-Fiction). Buban, Peter, Schmitt, Marshall L. and Carter, Charles G., Jr. Glencoe/McGraw Hill **(LRDC)**, *1999. 658* p. Order no. 9915 ($61.85 hdc.). Student Workbook - Order no. 9917 ($11.40 pbk.). Teacher's Resource Guide - Order no. 9916 ($62.30 pbk.).

This is a general resource that covers most topics in the electrical and electronics area. There is information provided about careers, safety and basic science in the first chapter. The bulk of the book looks at the specific topics of circuits, producing electricity, semiconductors and integrated circuits, wiring, testing, the information age and electricity and electronics at work. Each chapter begins with objectives, contains sidebars with interesting facts and ends with a summary and review. Photographs, line drawings and tables illustrate the key concepts being discussed. As this is an American resource, a suitable Canadian resource would have to be consulted for the correct codes. An index and a glossary are included. The teacher's guide and the student workbook contain several activities and experiments.
Suggested Use: General; Survey Course - Secondary Level

Electricity: Principles and Applications. 5th ed. (Print-Non-Fiction). Fowler, Richard J. (Basic Skills in Electricity and Electronics Series). Glencoe/McGraw Hill **(LRDC)**, 1999. 432 p. Order no. 1690 ($87.95 hdc.). Instructor's Manual - Order no. 1691 ($45.05 pbk.).

This resource presents a thorough look at the principles and applications of electricity. The concepts build from chapter to chapter. Self-test questions provide students with the opportunity to discover weak areas or affirm learned material. Each chapter contains objectives, many sample problems, a detailed summary and review and critical thinking questions. The colour-coded chapters, the black-and-white photographs and many diagrams make this a useful resource for students. Included in this text are a table of contents, several appendices and an index.
Suggested Use: Career Opportunities; Cells and Small Voltage Sources; Electric Motors; Integrated Circuits; Survey Course - Middle Level; *Survey Course - Secondary Level*

Electronic Communication Fundamentals Series (Video). Bergwall Productions (MCI), 1998. 20 min. Order numbers follow.

Recommended titles in this series include:

Basic Communication Systems
Order no. 950030 ($139.00)
Detection and Transmission
Order no. 950032 ($139.00)
Elements of Radio Communication
Order no. 950031 ($139.00)
FM & the Superhetrodyne Receiver
Order no. 950033 ($139.00).

This series of four videos takes a detailed and scientific look at how electricity has benefited communications and radio transmission. The series will be useful for the electronics portion of the curriculum if radio communication is an emphasis. The evolution of electronic communication is given in the first video along with discussion about electromagnetic radiation and the concept of Carrier. Other concepts covered include diode detectors, AM wave, antenna, waveform analysis and FM transmission.
Suggested Use: General

Electronic Products (Print-Non-Fiction). (Nuffield Design & Technology Series). Longman Publishing Group (PRN), 1997. 189 p. ISBN 0-582-31775-4 ($21.56 pbk.). Teacher's Guide - ISBN 0-582-31770-3 ($53.95 coil-bound).

This resource is orientated towards the student who is interested in designing and building electronic devices. Six areas are covered–sensing devices, measuring devices, electronic novelties, security devices, control systems and communicating devices. The first section of the book discusses the design process in general, while the remainder of the book goes into detail for each of the projects. Photographs, line drawings, quizzes and

charts all help to make this a student friendly resource. An index is included.

The teacher's guide offers practical advice on how to use the student book and assess the work done. It also gives background information on each of the projects.
Suggested Use: Digital Concepts; Survey Course - Secondary Level
Other Use: Design Studies

Electronics: Principles and Applications. 5th ed. (Print-Non-Fiction). Schuler, Charles A. (Basic Skills in Electricity and Electronics Series). Glencoe/McGraw Hill (MHR), 1999. 532 p. ISBN 0-02-804244-1 ($114.95 hdc.). Instructor's Manual - ISBN 0-02-804256-5 ($42.95 pbk.).

This technical resource prepares students to diagnose, repair, verify and install electronic circuits and systems. It provides a solid, practical foundation in analog electronic concepts and device theory. The 15 chapters progress from an introduction to electronics through solid-state theory, transistors, amplifiers, oscillators, radio, integrated circuits, control devices and regulated power supplies. Each of the colour-coded chapters begins with objectives and concludes with a summary and review and critical thinking questions. This book includes numerous diagrams, a table of contents, a glossary and an index.
Suggested Use: Amplifiers; Cells and Small Voltage Sources; Digital Concepts; Integrated Circuits; Operational Amplifiers; Power Supplies

Electronics Technology: Devices and Circuits (Print-Non-Fiction). Dugger, William E. and Gerrish, Howard H. Goodheart-Willcox Publisher (GDS), 1994. 656 p. ISBN 0-87006-085-6 ($79.50 hdc.).

This basic text provides students with information on electricity and electronics fundamentals, components, circuits and applications. Chapters 1 through 11 examine direct current and alternating current electricity. Chapters 12 through 21 present theory and applications that include diodes, transistors and various solid-state devices. This is a well-designed text with numerous diagrams and black-and-white photographs. The coloured photographs depict both male and female personnel. This resource includes a table of contents, a glossary and an index.
Suggested Use: Amplifiers; Career Opportunities; Cells and Small Voltage Sources; Digital Concepts; Electric Motors; Integrated Circuits; Operational Amplifiers; Power Supplies

Essential Skills/Compétences Essentielles: Skills for Life, Learning and Work (CD-ROM). Human Resources Development Canada (NAD), 2000. No order number is required. ($10.00).

(CAN) Developed by Human Resources Development Canada, this resource can provide some excellent answers to students who are wondering about future careers and the skills they will need. Skills such as reading, writing, numeracy, oral communication, thinking, problem solving, working with others and computer use are all connected to 170 different occupations. Students can look up a particular career/occupation and see how each of the skills fits in, or they can look up the skill and receive a list of all the occupations that would make use of that skill. For example, if problem solving is entered as a skill, it will list occupations such as mechanics, cosmetologists and carpenters. The program will then give examples of the types of problem solving that take place in each of these occupations. Students can then compare their skill levels with those that are needed on the job. Links to websites for further information are also provided. This information is also accessible through a website at: http://www15.hrdc-drhc.gc.ca/english/es.asp.
Suggested Use: Career Opportunities; Work Study; Teacher Reference
Other Use: Mechanical/Automotive

Essentials of Electronics. 2nd ed. (Print-Non-Fiction). Petruzella, Frank D. Glencoe/McGraw Hill **(LRDC)**, 2001. 726 p. Order no. 10 ($87.95 hdc.).

This is an excellent resource that covers all aspects of the *Electrical and Electronics 10, 20, A3, B30 Curriculum.* The format is easy to follow with bolded headings, charts and well-labelled diagrams. Objectives are listed at the beginning of each chapter and review questions are included to help students evaluate their understanding of the content presented. Included in this comprehensive resource are a table of contents, a glossary and an index.
Suggested Use: General; Survey Course - Secondary Level

The Essentials of Fire Fighting Series (Video). Please refer to the title: *Portable Extinguishers.*

Eye Protection: The Humorous Approach (Video). Programme Safety (PSA), 1992. 14 min. No order number is required. ($185.00).

While humour and eye injuries certainly do not go together, this video takes a different approach in getting across the seriousness of the issue. What may appear as obvious safety precautions are often overlooked. The video takes a detailed look at how injuries to the eye occur in several industrial situations. Techniques that are needed to avoid these accidents are discussed, as are procedures to follow if an eye accident occurs.
Suggested Use: Safety
Other Use: Autobody; Construction; Mechanical/Automotive; Welding

Guide for New Workers (Print-Non-Fiction). (Ready for Work Series). Saskatchewan Labour (SAL), 2001. 247 p. No order number is required. ($Free spiral-bound). Classroom Edition - No order number is required. ($Free loose-leaf).

(SK) Published by Saskatchewan Labour and distributed to all high schools in 2001, this resource offers very practical information for students in the Practical and Applied Arts courses. Some of the topics covered include applying for a job, employment equity, exploring careers, interviews, pay, rights and responsibilities, safety on-the-job and unions. As part of the *Ready for Work Series*, this book focuses on helping new workers make a successful transition to work.

A *Classroom Edition* is also available from Saskatchewan Labour. This version contains tips for teachers and can be photocopied in whole or in part for instructional use.
Suggested Use: Career Opportunities; Work Study
Other Use: Mechanical/Automotive

High School to Apprenticeship: A Link to the Future 2001: Handbook for High School Administrators and Guidance Counsellors (Print-Non-Fiction). (Ready for Work Series). Sask. Apprenticeship & Trade Certification Unit (SATC), 2001. 79 p. No order number is required. ($Free pbk.).

(SK) This booklet provides an overview of the apprenticeship program in Saskatchewan and the connection it has to several high school programs. It is an essential resource for teachers who may have students that are preparing for a career in a designated trade. Each of the designated trades in Saskatchewan is listed and details are given about entrance requirements and training.
Suggested Use: Career Opportunities; Work Study
Other Use: Autobody; Commercial Cooking; Construction; Cosmetology; Food Studies; Mechanical/Automotive; Tourism/Hospitality/Entrepreneurship; Welding

House Wiring Simplified: Tells and Shows You How (Print-Non-Fiction). Mix, Floyd M. Goodheart-Willcox Publisher (GDS), 1999. 208 p. ISBN 1-56637-542-8 ($41.50 hdc.).

Based on the 1999 National Electrical Code in the United States, this resource is useful for Saskatchewan schools as it teaches the fundamentals of basic, safe, house wiring procedures. As the book cautions, local

codes may vary so it is always best to check the provincial regulations. Intended for high schools, there are sections dealing with electrical terms, conduits, switches, tools, safety, wiring systems and procedures and house wiring circuits. The illustrations are very clear; the sections are short and well organized and there are review questions at the end of each chapter. An index and a glossary are included.
Suggested Use: Residential Wiring; Survey Course - Middle Level; Survey Course - Secondary Level

Industrial Electronics (Print-Non-Fiction). Petruzella, Frank D. (Basic Skills in Electricity and Electronics Series). Glencoe/McGraw Hill (MHR), 1996. 404 p. ISBN 0-02-801996-2 ($122.95 hdc.).

This resource offers a comprehensive exploration of industrial electronic circuits and equipment. It includes coverage of power distribution, power electronics, motor control, PLCs and process control systems. Each chapter contains stated objectives, self-test opportunities, a summary and review and critical thinking questions. This book contains numerous diagrams, a table of contents and an index.
Suggested Use: Amplifiers; Digital Concepts; Integrated Circuits; Operational Amplifiers; Power Supplies; Safety

Introduction to Technology (Print-Non-Fiction). Pierce, Alan J. and Karwatka, Dennis. Glencoe/McGraw Hill **(LRDC)**, 1999. 554 p. Order no. 9648 ($61.85 hdc.). Student Activity Manual - Order no. 9649 ($9.75 pbk.).

This resource is ideally suited to Middle Level PAA courses as it introduces the fundamentals of several subject areas within the same book. Within the first section, the concept of technology is discussed with an emphasis on its origins, careers, safety, computers and energy. In the following sections, overall technologies such as communication, production and transportation are examined. Each of these in turn looks at particular subject fields such as construction or photography. The resource is very student friendly as it uses many photographs, drawings, graphs, activities, questions and summaries. Overall this is an excellent resource to use, provided that the information is supplemented with more detailed information from each of the disciplines. An index and a glossary are included.
Suggested Use: Survey Course - Middle Level
Other Use: Construction; Design Studies; Drafting

Nuffield Design & Technology Series (Print-Non-Fiction). Please refer to the title: *Electronic Products.*

Physics: What Matters, What Moves Series (Video). Please refer to the title: *What Is Electricity?*

Portable Extinguishers (Video). (The Essentials of Fire Fighting Series). Action Training Systems (ATR), 1993. 18 min. Order no. VE107 ($135.00 U.S.).

This program presents the different types of fire extinguishers and how to use them correctly. It examines the rating system for extinguishers, shows the operating instructions for portable extinguishers, describes the types and use of hand-held extinguishers and demonstrates inspection techniques.
Suggested Use: Safety
Other Use: Mechanical/Automotive; Welding

Ready for Work (Kit). Saskatchewan Labour, Labour Standards Branch (SAL), 1999. No order number is required. ($Free).

(SK) Produced by Saskatchewan Labour, this comprehensive binder of excellent resources provides background information on virtually all areas of safety. The central concept in the package is that young people need more than a job to be ready for work. They need to know their rights and responsibilities and they need to know about health and safety and fairness in the workplace. The entire *Ready*

for Work program consists of up to 25 hours of interactive, in-class materials. Some of the sections include occupational health and safety, hazardous materials, recognizing hazards, labour standards for young workers and rights and responsibilities. Accessing Saskatchewan Labour's websites at www.readyforwork.sk.ca and www.labour.gov.sk.ca will provide more information about other support material that goes with the package, including videos and a CD-ROM. The entire *Ready for Work* binder is available through an STF workshop. Individual components can be requested through Saskatchewan Labour.
Suggested Use: Safety; Work Study
Other Use: Mechanical/Automotive

Ready for Work Series (Print-Non-Fiction). Please refer to the title: *Guide for New Workers.*

Safety Care Series (Video). Please refer to the title: *Electrical Safety in the Workplace.*

Safety Care Series (Video). Safetycare Inc. (SCI). No order number is required.

Recommended titles in this series include:

Eye Safety (1989, 10 min.)	($180.00)
Foot Safety (1990, 13 min.)	($180.00)
Hand Safety (1989, 13 min.)	($180.00)
Safety Awareness (1992, 20 min.)	($180.00).

In the *Safety Awareness* video, a general discussion of safety in the office and in the factory is explained and illustrated. The video raises awareness about the importance of safety and the proper procedures to follow in order to achieve a safe work environment.

Each of the other three videos takes a more specialized look at the hazards that exist for the eye, hand and foot. In addition to discussing the hazards that can result in injuries, each of the videos also discusses the control measures necessary to reduce these injuries. Although they have been produced for use by companies, these programs are of value in the classroom situation.
Suggested Use: Safety
Other Use: Autobody; Commercial Cooking; Construction; Mechanics/ Automotive; Welding

Safety First: Electrical Safety (Video). (Safety First Series). Cambridge Educational (MCI), 1998. 30 min. Order no. 10111 ($119.00).

This American program provides a basic introduction to electricity including what it is and how it affects us. It examines colour coding, the role of circuits and circuit breakers and fuses. The safety aspect is addressed with emphasis on prevention and treatment of electrical shocks.
Suggested Use: Safety

Safety First Series (Video). Please refer to the title: *Safety First: Electrical Safety.*

Step Into the World of Workplace Learning: A Collection of Authentic Workplace Materials (Print-Non-Fiction). Lewe, Glenda and MacLeod, Carol D. Nelson Thomson Learning (NEL), 2001. 303 p. ISBN 0-17-608571-8 ($39.95 binder).

(CAN) As the title indicates, this package is aimed at providing the classroom teacher with actual materials used in the workplace. Samples of newsletters, contracts, tables and graphs that are used in the workplace are provided so students will be able to acquire and enhance workplace competencies. In addition to workplace competencies, students can also acquire knowledge of the occupations that use the documents, the essential skills that are needed in that job and a better idea of the norms of the world of work. The collection is not designed to be used directly by learners, but rather to help teachers develop learning activities. The occupations highlighted are real world jobs that do not require university training. This information is also accessible through a website at: http://www15.hrdc-drhc.gc.ca/awm/default.asp.
Suggested Use: Career Opportunities; Work Study; Teacher Reference

Other Use: Mechanical/Automotive

Success in the Workplace. 2nd ed. (Print-Non-Fiction). Brand, Margaret, Sparkes, Ann Olney and Neufeld, Berne J. Copp Clark Ltd. (PRN), 1996. 225 p. ISBN 0-7730-5552-5 ($24.95 pbk.). Teacher's Edition - ISBN 0-7730-5553-3 ($51.95 loose-leaf).

(CAN) This is an update of the version previously listed in the 1996 Life Transitions Bibliography. Chapters 3 through 12 have been revised to reflect changes in the workplace environment. Slight modifications have been made to Chapters 13 through 20. Chapter 4, "Enhancing Your Employability Skills and Portfolio of Employability Skills," is new to this edition. Optional Internet activities have been added to some chapters. This excellent Canadian resource includes many ideas and activities utilizing various approaches and strategies (e.g., journal writing, case studies and rating scales) to assist students in acquiring generic employability skills and achieving personal career development goals.

The teacher's edition provides lesson overviews, teaching objectives, criteria for evaluation and answers to quizzes, case studies and chapter activities.

Both resources include a table of contents.
Suggested Use: Work Study
Other Use: Life Transitions 20/30

W5 Series (Video). Please refer to the title: *Dying to Work.*

What Is Electricity? (Video). (Physics: What Matters, What Moves Series). Agency for Instructional Technology **(MGR)**, 1992. 15 min. Dup. order no. V9453. Teacher's Guide for series - Order no. G9453 ($9.50 pbk.).

This program presents an overview of naturally occurring electricity found in nature and the role of matter and atoms in electrical charges. It shows how charged atomic particles come to provide electricity and how electric currents are created, transported and used.

Supporting print material is available from Media Group.
Suggested Use: General
Other Use: Science: Middle Level; Science: Secondary Level

Out of Print but Still Useful

Helping Solve the Employment Puzzle: A Toolbox for Middle & Secondary Levels (Print-Non-Fiction). SIAST Woodland Campus, 1998. Previously distributed to schools.

(SK) This resource is the result of a collaborative partnership involving Saskatchewan Education, SIAST Woodland Campus and Saskatchewan Labour. The objective of the resource is to provide assistance for teachers to incorporate employability skills into their curricula. The 24 activities that are included with the resource are adaptable to either the Middle or Secondary Level curricula. Some of the topics examined through the activities include realistic job expectations, being an on-the-job coach, group decision making, conflict of interest in the workplace, telephone etiquette, fair employment and customer service. Each activity is clearly explained with objectives, resources and step-by-step directions. Although this resource is not currently available for order, it was previously distributed to junior and senior high schools in the province.
Suggested Use: Survey Course - Middle Level; Survey Course - Secondary Level; Work Study
Other Use: Mechanical/Automotive

Index of Suggested Uses

Please note that the titles in this list are truncated. The complete titles appear in the citations for each resource.

Amplifiers

Electricity and Electronics
Electronics Technology: Devices and
Electronics: Principles and Applications
Industrial Electronics

Batteries

Delmar's Standard Textbook of
Electric Circuits and Machines

Career Opportunities

Blueprint for Life/Work Designs
Construction
Electricity and Basic Electronics
Electricity and Electronics
Electricity: Principles and Applications
Electronics Technology: Devices and
Essential Skills/Compétences
Guide for New Workers
High School to Apprenticeship: A Link to
Step Into the World of Workplace

Cells and Small Voltage Sources

Electricity and Basic Electronics
Electricity and Electronics
Electricity: Principles and Applications
Electronics Technology: Devices and
Electronics: Principles and Applications

Digital Concepts

Digital Electronics: Principles
Electrical Principles and Practices
Electricity and Basic Electronics
Electricity and Electronics
Electronic Products
Electronics: Principles and Applications
Electronics Technology: Devices and
Industrial Electronics

Electric Motors

Delmar's Standard Textbook of
Electric Circuits and Machines
Electrical Motor Controls
Electrical Power: Motors, Controls
Electrical Principles and Practices
Electricity and Basic Electronics
Electricity and Electronics
Electricity: Principles and Applications
Electronics Technology: Devices and

Electrical Motor Controls

Delmar's Standard Textbook of
Electric Circuits and Machines
Electrical Motor Controls
Electrical Power: Motors, Controls

General

Basic Electronics
Electrical/Electronic Systems
Electricity and Electronics Technology
Electronic Communication Fundamentals
Essentials of Electronics
What is Electricity?

Integrated Circuits

Delmar's Standard Textbook of
Electricity and Basic Electronics
Electricity and Electronics
Electricity: Principles and Applications
Electronics Technology: Devices and
Electronics: Principles and Applications
Industrial Electronics

Operational Amplifiers

Electronics: Principles and Applications
Electronics Technology: Devices and
Industrial Electronics

Power Supplies

Electric Circuits and Machines
Electrical Power: Motors, Controls
Electrical Principles and Practices
Electricity and Basic Electronics
Electricity and Electronics
Electronics Technology: Devices and
Electronics: Principles and Applications
Industrial Electronics

Residential Wiring

Electrical Code Simplified: Residential
Electrical Wiring: Residential
House Wiring Simplified: Tells and Shows

Safety

Dying to Work
Electrical Code Simplified: Residential
Electrical Principles and Practices
Electrical Motor Controls
Electrical Safety in the Workplace
Eye Protection: The Humorous Approach
Industrial Electronics
Portable Extinguishers
Ready for Work
Safety Care Series
Safety First: Electrical Safety

Work Study

Blueprint for Life/Work Designs
Essential Skills/Compétences
Guide for New Workers
Helping Solve the Employment (Out of Print)
High School to Apprenticeship: A Link to
Ready for Work
Step Into the World of Workplace
Success in the Workplace

Survey Course - Middle Level

Electrical Code Simplified: Residential
Electrical Principles and Practices
Electricity: Principles and Applications
Essentials of Electronics: A Survey
Helping Solve the Employment (Out of Print)
House Wiring Simplified: Tells and
Introduction to Technology

Survey Course - Secondary Level

Delmar's Standard Textbook of
Electrical Code Simplified: Residential
Electrical/Electronic Systems
Electrical Principles and Practices
Electrical Wiring: Residential
Electricity and Electronics Technology
Electricity: Principles and Applications
Electronic Products
Essentials of Electronics
Helping Solve the Employment (Out of Print)
House Wiring Simplified: Tells and Shows

Teacher Reference

Basic Electronics
Basic Mathematics for Electricity
Blueprint for Life/Work Designs
Digital Electronics: Principles
Essential Skills/Compétences
Step Into the World of Workplace

Media Index

Please note that the titles in this list are truncated. The complete titles appear in the citations for each resource.

CD-ROM

Essential Skills/Compétences
Skills for Life, Learning and Work

Kit

Ready for Work

Print-Non-Fiction

Basic Electronics
Basic Mathematics for Electricity
Blueprint for Life/Work Designs
Delmar's Standard Textbook of
Digital Electronics: Principles

Electric Circuits and Machines
Electrical Code Simplified: Residential
Electrical/Electronic Systems
Electrical Motor Controls
Electrical Power: Motors, Controls
Electrical Principles and Practices
Electrical Wiring: Residential
Electricity and Basic Electronics
Electricity and Electronics
Electricity and Electronics Technology
Electricity: Principles and Applications
Electronic Products
Electronics Technology: Devices and
Electronics: Principles and Applications
Essentials of Electronics
Guide for New Workers
Helping Solve the Employment Puzzle
High School to Apprenticeship: A Link to
House Wiring Simplified: Tells and Shows
Industrial Electronics
Introduction to Technology
Step Into the World of Workplace
Success in the Workplace

Video

Construction
Dying to Work
Earth's Driving Forces
Electrical Safety in the Workplace
Electricity
Electronic Communication Fundamentals
Eye Protection: The Humorous Approach
Portable Extinguishers
Safety Care Series
Safety First: Electrical Safety
What Is Electricity?

Distributor Directory

ATR Action Training Systems
13912 NE 20th Ave Suite 102
VANCOUVER WA 98686-1465
(800) 755-1440
(360) 571-3550
Fax: (360) 571-3554
NETSITE: http://www.action-training.com

GAG Gage Educational Publishing
Division of Canada Publishing Corp.
164 Commander Blvd
SCARBOROUGH ON M1S 3C7
(800) 667-1115
(416) 293-8141
Fax: (416) 293-9009
E-mail: info@gagelearning.com
NETSITE: http://www.gage learning.com/gage learning/default.asp

GDS General Distribution Services
325 Humber College Blvd
TORONTO ON M9W 7C3
(800) 387-0172
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Fax: (416) 445-5967
E-mail: gds@genpub.com
NETSITE: http://www.genpub.com

LRDC Saskatchewan Learning Resources Distribution Centre
(Formerly the Book Bureau)
1500 4th Ave
REGINA SK S4P 3V7
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Fax: (800) 668-9747
NETSITE: http://lrdc.sasked.gov.sk.ca/

MCI McIntyre Media Limited
6845 Rexwood Rd Unit 2
MISSISSAUGA ON L4V 1S5
(800) 565-3036
(905) 678-9866
Fax: (905) 678-2403
E-mail: mcintyre@istar.ca
NETSITE: http://www.mcintyre.ca

MGR Media Group
2710 Millar Ave
SASKATOON SK S7K 4J4
(888) 682-8808
(306) 933-4212
Fax: (306) 933-3183
E-mail: vidlib@saskatoon.com
NETSITE: http://videodb.mg.sk.ca/index.html

MHR McGraw-Hill Ryerson Limited
300 Water St
WHITBY ON L1N 9B6
(800) 565-5758
(905) 430-5000
Fax: (800) 463-5885
NETSITE: http://www.mcgrawhill.ca

NAD National Adult Literacy Database Inc.
Scovil House
703 Brunswick St
FREDRICTON NB E3B 1H8
(800) 720-6253
(506) 457-6900
Fax: (506) 457-6910
E-mail: info@nald.ca
NETSITE: http://www.nald.ca

NEL Nelson Thomson Learning
1120 Birchmount Rd
SCARBOROUGH ON M1K 5G4
(800) 268-2222
(416) 752-9448
Fax: (800) 430-4445
E-mail: inquire@nelson.com
NETSITE: http://www.nelson.com

NLW The National Life/Work Centre
488 Centrale St
MEMRAMCOOK NB E4K 3S6
(888) 533-5683
Fax: (506) 758-0353
E-mail: lifework@nbnet.nb.ca
NETSITE: http://www.lifework.ca/

PRN Pearson Education Canada
School Division
195 Harry Walker Parkway
NEWMARKET ON L3Y 7B4
(800) 387-8028
(416) 447-5101
Fax: (800) 563-9196
NETSITE: http://www.pearsoned.ca/

PSA Programme Safety
1315 Lawrence Ave E Suite 403
TORONTO ON M3A 3R3
(877) 303-7233
(416) 447-8555
Fax: (416) 447-7594
E-mail: prosafe@istar.ca
NETSITE: http://www.firstsafety
trainingprogrammes.com

SAL Saskatchewan Labour,
Labour Standards Branch
4th Fl 1870 Albert St
REGINA SK S4P 3V7
(306) 787-3151
(877) 419-3510
Fax: (306) 787-0036
NETSITE: http://www.labour.gov.
sk.ca/

SATC Sask. Apprenticeship &
Trade Certification Unit
Room 226 Walter Scott Building
3085 Albert St
REGINA SK S4P 3V7
(306) 787-2444
Fax: (306) 787-5105
E-mail: Apprenticeship@sasked.gov.
sk.ca

SCI Safetycare Inc.
3050 Harvester Rd
Suite 110
BURLINGTON ON L7N 3J1
(905) 631-6070
Fax: (905) 631-8183
E-mail: safety@safetycare.com.au
NETSITE: http://www.safetycare.
com.au

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Appendix E: Sample Module Recordkeeping Charts

Electrical, Electronics 10

Student name: _____

School name: _____

Module code	Modules	Hours	Date	Teacher Initial
ELEC01A	Module 1A: Safety and Health C			
ELEC02A	Module 2A: Concepts about Electricity C			
ELEC04A	Module 4A: Wiring Circuits C			
ELEC06	Module 6: Conductors C			
ELEC7A	Module 7A: Overcurrent Devices C			
ELEC17A	Module 17A: Introduction to Electronics C			
ELEC18A	Module 18A: Cells and Small Voltage Sources C			
ELEC19	Module 19: Measuring Instruments, Meters C			
ELEC20	Module 20: Careers C			
ELEC21A	Module 21A: Introductory Circuit Board Fabrication O			
ELEC22A	Module 22A: Soldering, Desoldering and Recycling Components O			
DRAF03	Module 3: Sketching and Freehand Drawing Fundamentals O			
ELEC99	Module 99: Extended Study O			

C = Core module
O = Optional module

Note: When the Extended Study, Work Study Preparation and Follow-up Activities, and Work Study modules are studied for the first time, record the module number and the letter A (Extended Study Module 99A). If the module is used at another level, the module is recorded using the letter B (Extended Study Module 99B).

All recordkeeping charts should be copied to school letterhead.

Sample Module Recordkeeping Charts

Electrical 20

Student name: _____

School name: _____

Module Code	Modules	Hours	Date	Teacher Initial
ELEC01B	Module 1B: Safety and Health C			
ELEC02B	Module 2B: Concepts about Electricity C			
ELEC03A	Module 3A: Electrical Principles of Alternating Current Circuits and Transformers C			
ELEC04B	Module 4B: Wiring Circuits C			
ELEC05A	Module 5A: Basic Relays and Relay Circuits C			
ELEC07B	Module 7B: Overcurrent Devices C			
CONS03	Module 3: Basic Layout and Hand Tools O			
ELEC08A	Module 8A: Residential Wiring Methods C			
DRAF13	Module 13: Floor Plans O			
ELEC17B	Module 17B: Introduction to Electronics C			
ELEC18B	Module 18B: Cells and Small Voltage Sources C			
DRAF31	Module 31: Reading Technical Drawings O			
ELEC13A	Module 13A: Alternating Current Theory and Circuits C			
ELEC33A	Module 33A: Work Study Preparation and Follow-up Activities O			
ELEC34A	Module 34A: Work Study O			
ELEC99	Module 99: Extended Study Module O			

C = Core module
O = Optional module

Note: When the Extended Study, Work Study Preparation and Follow-up Activities, and Work Study modules are studied for the first time, record the module number and the letter A (Extended Study Module 99A). If the module is used at another level, the module is recorded using the letter B (Extended Study Module 99B).

All recordkeeping charts should be copied to school letterhead.

Sample Module Recordkeeping Charts

Electrical A30

Student name: _____

School name: _____

Module code	Modules	Hours	Date	Teacher Initial
ELEC01C	Module 1C: Safety and Health C			
ELEC02C	Module 2C: Concepts about Electricity C			
ELEC04C	Module 4C: Wiring Circuits C			
ELEC05B	Module 5B: Basic Relays and Relay Circuits C			
ELEC08B	Module 8B: Residential Wiring Methods C			
ELEC09A	Module 9A: Residential Circuits and Service C			
ELEC10A	Module 10A: Direct Current Generators O			
ELEC11A	Module 11A: Direct Current Motors O			
ELEC12A	Module 12A: Residential Lighting C			
ELEC13B	Module 13B: Alternating Current Theory and Circuits C			
ELEC14A	Module 14A: Single Phase Power Transformers C			
ELEC15A	Module 15A: Alternating Current Motors O			
ELEC33B	Module 33B: Work Study Preparation and Follow-up Activities O			
ELEC34B	Module 34B: Work Study O			
ELEC99	Module 99: Extended Study O			

C = Core module
O = Optional module

Note: When the Extended Study, Work Study Preparation and Follow-up Activities, and Work Study modules are studied for the first time, record the module number and the letter A (Extended Study Module 99A). If the module is used at another level, the module is recorded using the letter B (Extended Study Module 99B).

All recordkeeping charts should be copied to school letterhead.

Sample Module Recordkeeping Charts

Electrical B30

Student name: _____

School name: _____

Module code	Modules	Hours	Date	Teacher Initial
ELEC01D	Module 1D: Safety and Health C			
ELEC02D	Module 2D: Concepts about Electricity C			
ELEC05C	Module 5C: Basic Relays and Relay Circuits C			
ELEC08C	Module 8C: Residential Wiring Methods C			
ELEC09B	Module 9B: Residential Circuits and Service C			
ELEC10B	Module 10B: Direct Current Generators O			
ELEC11B	Module 11B: Direct Current Motors O			
ELEC12B	Module 12B: Residential Lighting C			
ELEC13C	Module 13C: Alternating Current Theory and Circuits C			
ELEC14B	Module 14B: Single Phase Power Transformers C			
ELEC15B	Module 15B: Alternating Current Motors O			
ELEC16	Module 16: Motor Starters and Controls O			
ELEC33C	Module 33C: Work Study Preparation and Follow-up Activities O			
ELEC34C	Module 34C: Work Study O			
ELEC99	Module 99: Extended Study O			

C = Core module
O = Optional module

Note: When the Extended Study, Work Study Preparation and Follow-up Activities, and Work Study modules are studied for the first time, record the module number and the letter A (Extended Study Module 99A). If the module is used at another level, the module is recorded using the letter B (Extended Study Module 99B).

All recordkeeping charts should be copied to school letterhead.

Sample Module Recordkeeping Charts

Electronics 20

Student name: _____

School name: _____

Module code	Modules	Hours	Date	Teacher Initial
ELEC01B	Module 1B: Safety and Health C			
ELEC02B	Module 2B: Concepts about Electricity C			
ELEC03A	Module 3A: Electrical Principles of Alternating Current Circuits and Transformers C			
ELEC07B	Module 7B: Overcurrent Devices C			
ELEC13A	Module 13A: Alternating Current Theory and Circuits C			
ELEC14A	Module 14A: Single Phase Power Transformers C			
ELEC17B	Module 17B: Introduction to Electronics C			
ELEC19B	Module 19B: Measuring Instruments, Meters C			
ELEC22B	Module 22B: Soldering, Desoldering and Recycling Components (Optional) O			
ELEC23	Module 23: Power Supplies C			
ELEC24A	Module 24A: Basic Transistor Theory C			
ELEC26A	Module 26A: Tuned Circuits and Oscillators C			
ELEC27	Module 27: Radio Communications O			
ELEC28	Module 28: Ultrasonics O			
ELEC32A	Module 32A: Computer Recycling O			
ELEC33D	Module33D: Work Study Preparation and Follow-up Activities O			
ELEC34D	Module 34D: Work Study O			
ELEC99	Module 99: Extended Study O			

C = Core module
O = Optional module

Note: When the Extended Study, Work Study Preparation and Follow-up Activities, and Work Study modules are studied for the first time, record the module number and the letter A (Extended Study Module 99A). If the module is used at another level, the module is recorded using the letter B (Extended Study Module 99B).

All recordkeeping charts should be copied to school letterhead.

Sample Module Recordkeeping Charts

Electronics A30

Student name: _____

School name: _____

Module code	Modules	Hours	Date	Teacher Initial
ELEC01C	Module 1C: Safety and Health C			
ELEC02C	Module 2C: Concepts about Electricity C			
ELEC03B	Module 3B: Electrical Principles of Alternating Current Circuits and Transformers C			
ELEC13B	Module 13B: Alternating Current Theory and Circuits C			
ELEC17C	Module 17C: Introduction to Electronics C			
ELEC19C	Module 19C: Measuring Instruments, Meters C			
ELEC21	Module 21: Printed Circuit Board Fabrication O			
ELEC24B	Module 24B: Basic Transistor Theory C			
ELEC25	Module 25: Integrated Circuits O			
ELEC26B	Module 26B: Tuned Circuits and Oscillators C			
ELEC29A	Module 29A: Digital Concepts C			
ELEC30A	Module 30A: Digital Circuits C			
ELEC32B	Module 32B: Computer Recycling O			
ELEC33C	Module33C: Work Study Preparation and Follow-up Activities O			
ELEC34C	Module 34C: Work Study O			
ELEC99	Module 99: Extended Study O			

C = Core module
O = Optional module

Note: When the Extended Study, Work Study Preparation and Follow-up Activities, and Work Study modules are studied for the first time, record the module number and the letter A (Extended Study Module 99A). If the module is used at another level, the module is recorded using the letter B (Extended Study Module 99B).

All recordkeeping charts should be copied to school letterhead.

Sample Module Recordkeeping Charts

Electronics B30

Student name: _____

School name: _____

Module code	Modules	Hours	Date	Teacher Initial
ELEC01D	Module 1D: Safety and Health C			
ELEC02D	Module 2D: Concepts about Electricity C			
ELEC13C	Module 13C: Alternating Current Theory and Circuits C			
ELEC17D	Module 17D: Introduction to Electronics C			
ELEC27A	Module 27A: Communications, Radio O			
ELEC27B	Module 27B: Communications, Antennas O			
ELEC27C	Module 27C: Communications, Fibre Optics O			
ELEC29B	Module 29B: Digital Concepts C			
ELEC29C	Module 29C: Digital Concepts C			
ELEC30B	Module 30B: Digital Circuits C			
ELEC30C	Module 30C: Digital Circuits C			
ELEC33D	Module33D: Work Study Preparation and Follow-up Activities O			
ELEC34D	Module 34D: Work Study O			
ELEC99	Module 99: Extended Study O			

C = Core module
O = Optional module

Note: When the Extended Study, Work Study Preparation and Follow-up Activities, and Work Study modules are studied for the first time, record the module number and the letter A (Extended Study Module 99A). If the module is used at another level, the module is recorded using the letter B (Extended Study Module 99B).

All recordkeeping charts should be copied to school letterhead.